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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HUYNH, SON P

ART UNIT PAPER NUMBER

2611

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17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/359,561

Applicant(s)

LUDVIG ET AL.

Examiner

Son P Huynh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 2-21 have been considered but are moot in view of the new ground(s) of rejection.

It is noted that Applicants agree to file a Terminal Disclaimer for claims 2-8 and 14 if the subject matter patent application is finally allowed (page 4, section 1)

Claim Objections

2. Claim 20 is objected to because of the following informalities: the term "of for" in line 2 should be replaced as "for". Appropriate correction is required.

Double Patenting

3. Claims 2-8, 14-15 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 and 10-13 of U.S. Patent No. 6,415,437 (hereinafter referred to as '437).

Regarding claim 2, claim 1 of '437 recites a method for producing a digital bitstream containing an interactive program guide comprising combining, in a frame synchronized manner, background imagery with at least one video sequence and at least one graphic containing program guide information to form a composited frame

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sequence; and encoding the composited frame sequence to compress information therein to form a digital bitstream (see col. 8, line 57-col. 9, line 8). Thus, claim 2 is broader in scope than patent claim 1. The digital bitstream containing an interactive program guide reads on "encoded user interface." It is obvious that video frame sequence is encoded within a head end of an information distribution system in order to provide encoded video frame sequence to plurality of user.

Regarding claim 3, the limitations being claimed correspond to limitations of claim 1 of '437 (lines 7-8 and lines 18-19).

Regarding claim 4, the limitations being claimed correspond to limitations of claim 1 of '437 (lines 7-17).

Regarding claim 5, the limitations being claimed correspond to limitations of claim 2 of '437.

Regarding claim 6, the limitations being claimed correspond to limitations of claim 3 of '437.

Regarding claim 7, the limitations being claimed correspond to limitations of claim 4 of '437.

Regarding claim 8, the limitations being claimed correspond to limitations of claim 5 of '437.

Regarding claim 14, the limitations being claimed correspond to limitations of claim 6 of '437.

4. Claim 15 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 and 10-13 of U.S. Patent No. 6,415,437 (hereinafter referred to as '437) and in view of Eyer et al. (US 5,801,753).

Regarding claim 15, claims 15 and 16 of '437 recite the limitations of claim 15 wherein the encoded user interface is the digital bitstream representing interactive program guide. Claim 15 as claimed is broader in scope than patent claims 15 and 16 of '437. However, claims 15 and 16 of '437 do not recite providing a unique packet identifier (PID) for each IPG page.

Eyer teaches providing a unique packet identifier for each IPG page (see col. 7, line 9+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '437 to incorporate the feature as taught by Eyer in order to provide desired IGP to targeted destination.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-10, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terasawa et al. (US 6,147,714), and in view of Berezowski et al. (US 6,064,376).

Regarding claim 2, Terasawa et al. discloses a method of producing an encoded user interface comprising: producing a video frame sequence representing an interactive program guide by combining background imagery with still picture and at least one graphic containing program guide information to form the video frame sequence;

encoding the video frame sequence within a head end of an information distribution system (see figures 1, 7 and 8). However, Terasawa does not explicitly disclose combining video sequence in the video frame sequence.

Berezowski teaches combining video sequence (promotional information) with program guide information within a head end (see figure 4 and col. 4, line 41+).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Terasawa to incorporate the feature as taught by Berezowski in order to provide detail information of video program to user.

Regarding claim 3, Terasawa et al. discloses the step of encoding the composited frame sequence to compress information therein to form a digital bitstream (see figure 1).

Regarding claim 4, Terasawa et al. in view of Berezowski teaches a method as discussed in the rejection of claim 2. Terasawa further teaches compositing, frame by frame, still picture, background pictures and plurality of program guide graphics to form a plurality of program guide frame sequence that represent individual program guide pages. However, Terasawa does not explicitly disclose compositing at least one video sequence to form a background sequence.

Berezowski teaches compositing at least one video sequence onto the background imagery to form a background sequence (see figure 4); and compositing a plurality of program guide graphics onto the background sequence, where a different program guide graphic is composited onto the background sequence to form a plurality of program guide frame sequences that represent individual program guide pages (see figures 4 and 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa to incorporate a feature as

taught by Berezowski in order to provide more information of a television program to viewer.

Regarding claim 5, Terasawa et al. discloses separately encoding each of the program guide frame sequences to form a digital bitstream for each of the program guide frame sequences (see figure 1).

Regarding claim 6, Terasawa et al. discloses multiplexing each of the digital bitstreams into a common transport stream (see figure 1).

Regarding claim 7, Terasawa et al. in view of Berezowski et al. teaches a method as discussed in the rejection of claim 6. However, neither Terasawa nor Berezowski disclose fifteen program guide sequences are formed, encoded, and contained in a common transport stream. It is obvious to one of ordinary skill in the art to have a certain numbers of program guide sequences encoded in a common transport stream in order to achieve design technology.

Regarding claim 8, Terasawa et al. discloses encoding an audio signal associated with one of the video sequences; and multiplexing the encoded audio signal into the common transport stream (see figure 1).

Regarding claim 9, Terasawa et al. discloses the video frame sequence is a television program (see figure 1).

Regarding claim 10, Berezowski teaches the video frame sequence is an advertising program (see figure 8).

Regarding claim 14, Terasawa et al. discloses multiplexing foreground program guide data into the common transport stream (see figures 1 and 8).

Regarding claim 15, Terasawa teaches a method of producing an encoded user interface comprising: combining background imagery with each of a plurality of still picture to form a plurality of IPG; overlaying a plurality of respective graphic images containing program guide information over respective ones of each of the plurality of IPG to form a plurality of IPG page portions; encoding IPG pages within a head end of an information distribution system to form the plurality of bitstreams; multiplexing the plurality of bitstreams in a common transport stream to subscriber equipment (see figures 1-2, 8). Terasawa further discloses transport stream has a unique code (see figures 14, 19). Inherently, the method comprises providing a unique packet identifier (PID) for each IPG page. However, Terasawa does not disclose combining video sequences to form IPG video portions and

Berezowski teaches combining video sequences to form IPG video portions (see figures 4-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa to incorporate the feature as taught by Berezowski in order to provide detail information of video program to user.

Regarding claim 16, Berezowski teaches each bitstream comprises a different graphical component and a matching video component (see figures 4-7).

7. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terasawa et al. (US 6,147,714) in view of Berezowski et al. (US 6,064,376), and further in view of Civanlar et al. (US 5,623,308).

Regarding claim 11, Terasawa et al. in view of Berezowski et al. teaches a method as discussed in the rejection of claim 2. Terasawa et al. further discloses transmitting programs in different motions (see col. 14, lines 53-65). However, neither Terasawa et al. nor Berezowski et al. specifically discloses the video frame sequence is encoded using slice based encoding.

Civanlar et al. discloses encoding video frame sequence using slice based encoding (see figure 3). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Terasawa and Berezowski with a

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method of slice based encoding as taught by Civanlar et al. in order to increase efficiency of the system.

Regarding claim 12, Civanlar et al. discloses slice based encoding encodes different regions in a different manner than the encoding that is performed upon other portions of the video frame sequence (see figures 3 and 5).

Regarding claim 13, Civanlar et al. discloses each region is assigned a unique program identifier (see figures 3 and 5).

8. Claims 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terasawa et al. (US 6,147,714), in view of Berezowski et al. (US 6,064,376), and further in view of Chen et al. (US 5,917,830).

Regarding claim 17, Terasawa in view of Berezowski teaches a method as discussed in the rejection of claim 16. Berezowski further discloses program listings in region 40 are provided as a scrolling list (see col. 6, line 26+). However, neither Terasawa nor Berezowski explicitly discloses providing an indicator in each bitstream where the video component may be switched from one PID to another PID.

Chen discloses inserting pre-splicing packets and post-splicing packet between primary packetized data stream and secondary packetized data stream where the pre-

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splicing packet has sequence start code which follows the sequence end code of the primary packetized data stream and the post splicing data packet has start code which follows the end code which is associated with the last packet of the commercial (see col. 2, line 55+). It is necessary that an indicator is provided in each bitstream where the video component may be switched from one PID to another PID in order to switch between primary and secondary packetized data streams.

Regarding claim 18, Chen teaches forming the IPG pages (packets) in a similar length compared to each other (see col. 15, line 33+).

Regarding claim 19, Chen teaches inserting null packets into other packets such that all of the packets are equal in length; and adding switching packets (pre-splicing packet or post-splicing packets) at an end of the IPG sequence (primary or secondary data stream) after the null packets. It is obvious to identify the longest IPG page in order to reduce the waste of bandwidth.

Regarding claim 20, Chen teaches buffering all packets for all IPG pages for each sequence of packets prior to forming the transport stream; ordering packets of the IPG pages in the transport stream, wherein the packets for each IPG page appear at slightly higher or lower frequencies, thereby finishing at a common point; and adding switching packets at an end of each sequence of IPG pages (see figure 4).

Regarding claim 21, Chen teaches starting each IPG page sequence together; waiting until all packets for all of the IPG pages of the IPG pages are generated; and inserting switching packets in the bitstreams at a common interval and location in the bitstream (see figure 4).

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P Huynh whose telephone number is 703-305-1889. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on 703-305-4380. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

Son P. Huynh
May 15, 2003



VIVEK SRIVASTAVA
PATENT EXAMINER